SURGICAL DIATHERMY IN THE TREATMENT OF CERVICITIS WITH A NEW TYPE OF FLEXIBLE SPIRAL ELECTRODE

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CHRONIC cervicitis constitutes, in our experience, 80 per cent of all gynecological disorders treated in clinic patients. The treatment of these cases has often been discouraging and unsatisfactory. In spite of many approved methods of local treatment the leucorrheal discharge does not clear up, nor does the cervix return to its normal state.

With the new electrode to be described, surgical diathermy or electrocoagulation has produced unusually good results. This new electrode has a flexible handle slightly larger than a pencil, and is twelve inches in length. The proximal end is fitted with a suitable adaptor for connection with the diathermy cords. The active end is composed of two spiral electrodes, 13 French caliber, and 1½ inches in length, insulated from each other and ending in a blue point. The accompanying illustration demonstrates the simplicity of the electrode. (Fig.1.)

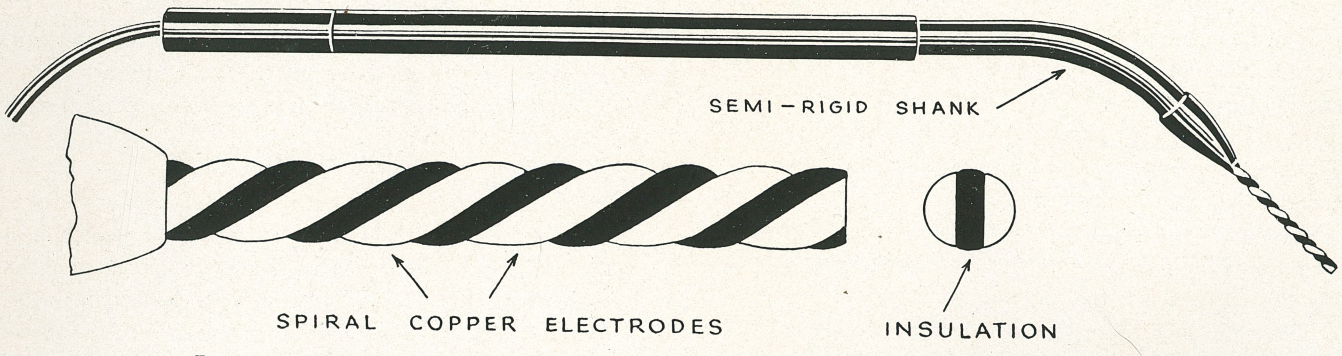

Fig. 1. The Kimble-Jaros Electrode. (Lower drawings considerably enlarged to show details of construction. Actual length of electrode from end of rigid shaft to tip of spiral is 12 inches.)

According to Jaros[1] this flexible handle has the following advantages:

"It is practically unbreakable and will prove serviceable for years.

"It has no necessarily detached parts and yet it can be instantly removed from the cord.

"It retains a constantly smooth surface which keeps clean.

"It can be bent to any desirable curve or angle and remains in any set position. . . .

"Its length and its narrow diameter allow easy access to any cavity; its small weight nicely balances a light cord. . . .

"Both electrode and cord can be boiled, rendering them available in a sterile field. It is advisable for ordinary work to immerse the electrode in solutions such as Metaphen or Merthiolate.

"Its flexibility allows direct vision—the hand need not be in direct line with the inserted portion of the electrode.

"There is, of course, no need for the indifferent electrode or autocondensation cushion."

In addition the active part of this electrode has the following advantages:

Due to its narrow diameter, it can be inserted in any cervical canal or laceration.

It does not have to be rotated.

Due to its spiral construction, it is practically impossible to obtain desiccation or carbonization. The tip is used both for coagulation of erosions and Nabothian cysts.

METHOD OF COAGULATION

The mode of application is first to short circuit the current on the low or medium output terminals. The

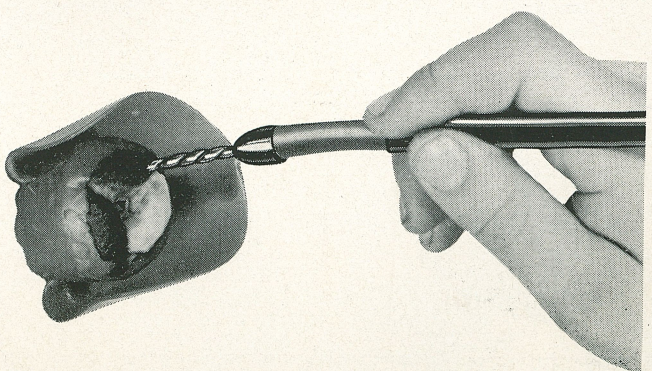

Fig. 2. Stellate lacerations with erosion. Part of erosion at lower right has been coagulated. The electrode shows beginning of treatment on upper part of erosion. (Photo made from wax model.)

gaps should be opened until 2,000 ma. is shown to register on the ammeter.

The cervix is exposed through a bivalve speculum and the vagina is cleansed with cotton saturated with a 50 per cent tincture of green soap. The distal end of the handle is bent so that the electrode is parallel with the canal. The electrode is then inserted to the internal os and applied to the side of the canal, beginning at any desired point. The current is turned on periodically with the foot switch. A short oscillating motion is imparted to the electrode so it does not adhere to the mucosa. This also assures an even coagulation throughout the canal.

The same oscillation motion is used in the treatment of lacerations. (Fig. 2). From 10 to 20 seconds are sufficient to coagulate the entire cervical canal to a depth of 2 to 5 mm. The depth varies with the type of case and is left to the judgment of the operator. Any part or all of the canal can be coagulated at the first treatment. Additional areas can be treated two or three weeks later.

For the erosion of the *portio* about 750 ma. on short circuit are used. The tip of the electrode is applied perpendicularly to the surface. Coagulation slightly larger in area than the tip takes place in about half a second. The electrode is reapplied to other areas until the entire erosion has been treated. (Fig. 3.)

If cysts are present they are first punctured and then coagulated by inserting the tip of the electrode and applying the current for one second. (Fig. 4.)

The patient is requested to return at weekly intervals following the first treatment, at which time the cervical canal is examined for any possible stenosis. A tampon is left in the vagina, saturated with the following solution:

Ichthyol	6	parts
Tr. Iodine	2	"
Sol. Boroglyceride	20	"
Glycerite Hydrastine	10	"
Phenol	3	"
Glycerine	59	"

The patient is told to remove the tampon 4 to 6 hours later.

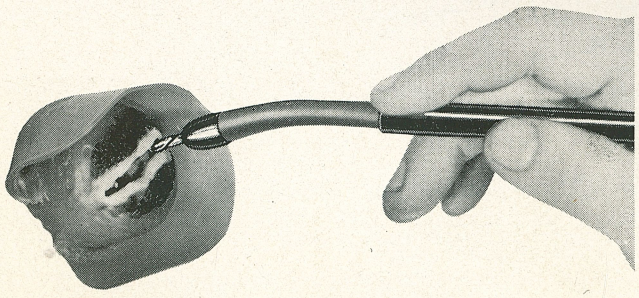

Fig. 3. Extensive lacerations with erosion. The canal and lacerations have been coagulated. The electrode is shown at completion of coagulation of the right laceration. (Photo made from wax model.)

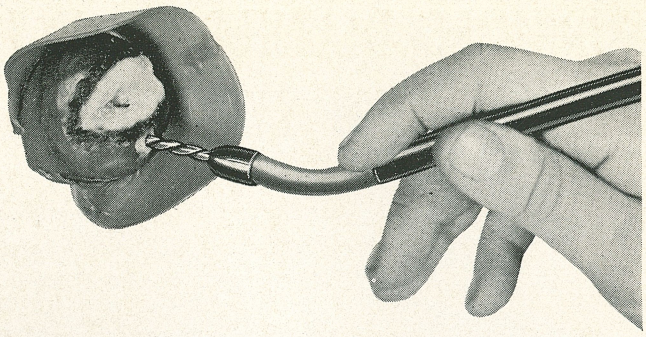

Fig. 4. Chronic cervicitis. The erosion on portio has been coagulated. Nabothian cyst in lower lip is being treated. The cyst slightly to the left has been punctured and is ready for treatment. (Photo made from wax model.)

CLINICAL DATA

The first 31 consecutive cases treated by this new method were as follows:

4 were nulliparous with history of Neisserian infection.

6 had history of abortion, curettage or miscarriage.

19 were parous with laceration, erosions, cervical stenosis, and Nabothian cysts.

In addition 2 had cervical polypi.

Of the 31 cases, 2 had been operated on for cervical "ulcer," 6 treated with electric cautery, 4 by copper ionization and 9 by medical means. Ten were untreated cases. Two of the cautery cases had complete cervical stenosis.

Of the 31 cases, 26 were cured at end of 6 to 10 weeks. Four were symptomatically cured, but the cervices had not returned to their normal size at end of ten weeks. One had a complete hysterectomy 7 weeks after first treatment for other pathologies. Only a single patient had a moderate hemorrhage one week after treatment. (This patient had a systolic blood pressure of 220.)

CONCLUSIONS

The results from the treatment as obtained with the aid of the above described new type of electrode have been very good. If carefully performed the entire procedure is very simple. It requires no anaesthesia and surpasses in its results the more elaborate operations current for the same conditions. Very little after treatment is necessary. Outside of the increase in leucorrheal discharge for 2 to 4 weeks, there are practically no other disadvantages.

I believe this new electrode represents a definite improvement in our treatment of cervicitis.

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REFERENCE

Jaros, Jos. F.: Electrocoagulation of Tonsils — A Biterminal Electrode, *Arch. Phys. Therap. X-Ray, Rad.* 13:682, (Nov.) 1932.